

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 December 2004 (29.12.2004)

PCT

(10) International Publication Number
WO 2004/113050 A1

(51) International Patent Classification: B29C 47/06,
A61C 15/04, C08J 5/18

(21) International Application Number:
PCT/BR2003/000087

(22) International Filing Date: 24 June 2003 (24.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): MANE-
GRO ADMINISTRAÇÃO E PARTICIPAÇÕES
LTDA. [BR/BR]; Av. Nilo Peçanha 50, Sala 2111, Centro,
20020-100 Rio de Janeiro (BR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): ALMEIDA NETO,
José, Antonio [BR/BR]; Av. Pastor Martin Luther King
Jr., 8.939, CEP- Rio de Janeiro, RJ (BR).

(74) Agent: DANNEMANN, SIEMSEN, BIGLER &
IPANEMA MOREIRA; Caixa Postal 2142, Rua Marquês
de Olinda, 70, 22251-040 Rio de Janeiro, RJ (BR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

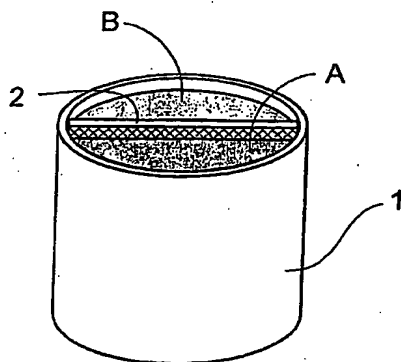
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims and statement

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A PROCESS FOR MANUFACTURING A PTFE FILAMENT, AND A PTFE FILAMENT OBTAINED BY THIS PROCESS



(57) Abstract: The present invention consists of an inventive process for manufacturing a PTFE filament (7) of the type comprising steps of extrusion, and, subsequently, stretching, heating and cutting, and an inventive PTFE filament obtained by this process, are provided. The process of the present invention comprises the following steps prior to extrusion: providing a recipient, which preferably consists of a cylinder (1) of a pre-form machine, having rigid side walls; arranging a first mixture (A) containing PTFE filler, and a second mixture (B) containing PTFE, inside the recipient, side by side and aligned with the side walls; and pressing the first and second mixtures in a direction parallel to the side walls to form a billet (5) in which the first and second mixtures (A, B) have different coefficients of friction. After these steps, the billet (5) is extruded to form a strand (6), which is subsequently stretched, heated, rolled and cut by known processes in the art to form the inventive PTFE filament, which comprises one side with a filler and the other side without filler, so that these sides have different coefficients of friction. Also, in a preferred embodiment, the filament presents each side with a different color.

WO 2004/113050 A1

BEST AVAILABLE COPY

BEST AVAILABLE COPY